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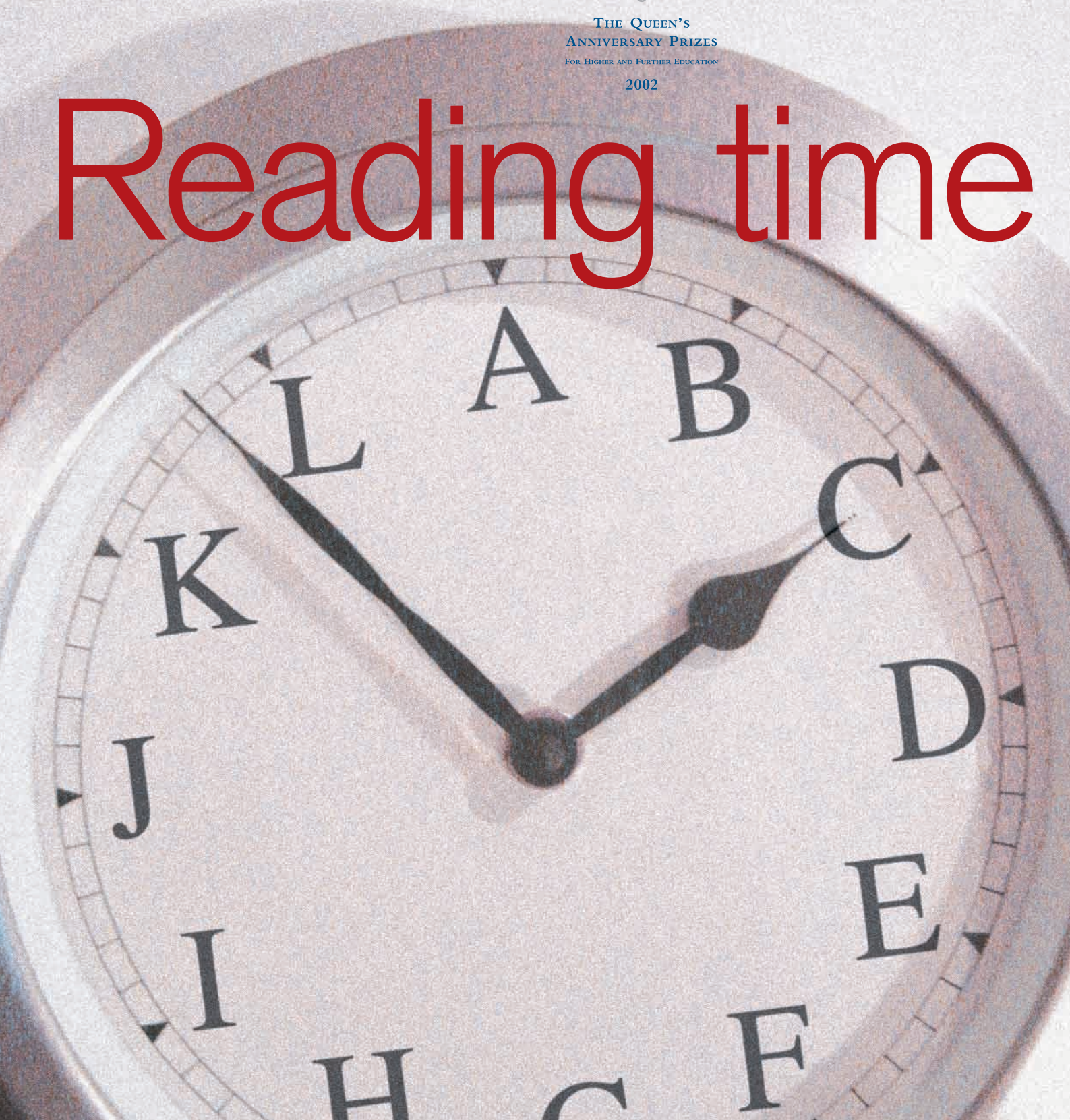
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Fair pay for stable lads



THE QUEEN'S
ANNIVERSARY PRIZES
FOR HIGHER AND FURTHER EDUCATION
2002

Reading time



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Large benefits, low cost

**Is the government's National Literacy Strategy effective?
Stephen Machin and Sandra McNally look at the evidence
from the pilot project.**

In 1999 the Moser report identified one in five adults in the UK as being functionally illiterate. How do we ensure that the next generation of adults does not suffer the same fate?

The National Literacy Strategy, introduced in September 1998, is a major initiative aimed at tackling these problems at primary school. It involves a daily "literacy hour", with a practical structure for time and class management and teaching objectives for each term. But does it work? The government has been criticised for failing to meet its own targets for tests at the end of Key Stage 2 (i.e. the 7 to 11 phase of education). Although economists have had much to say about the effect of increasing resources on pupil attainment, they have generally not considered the effect of changing the content and structure of how a subject is taught.

We present evidence that the literacy hour works. It comes from the National Literacy Project (NLP), which was an immediate forerunner of the National Literacy Strategy. This introduced the literacy hour into a sub-set of schools within a number of Local Education Authorities. We show that the policy not only led to a substantial improvement in attain-

ment, but did so at a low cost. It also had a marked impact on the well-known "gender gap" (favouring girls) as it had a larger differential impact on boys.

The NLP was aimed in particular at improving the low levels of reading and writing skills in many badly performing inner city schools. An OFSTED report at the time was critical of the teaching practices in such schools, which included problems like free reading with little or no intervention by the teacher and too much time hearing individual pupils read. In the same way as the National Literacy Strategy, the NLP changed the content and structure of how literacy was taught. This new approach was based on educational research and on international experience of similar schemes, especially in the US. Since the NLP was introduced in only a sub-set of schools two years prior to the National Literacy Strategy (which affected all schools), we have an opportunity to evaluate the effects of the literacy hour by comparing the educational attainment of children in NLP schools with that in similar schools where the NLP was not introduced.

The National Literacy Project was introduced in some 400 junior schools during the school years 1996/97 and

There is clear evidence of improvement in NLP schools

1997/98. (It was also launched in 112 infant schools, but this part is not relevant here.) About 80% of NLP schools were located in inner cities, where the most disadvantaged in England are concentrated. Most schools entered the project because they had weaknesses in reading. The planned cost of the NLP was £12.5 million over five years.

The descriptive part of our overall findings is summarised in Table 1. The upper part of the Table shows two primary school attainment measures for three consecutive years: a) the mean percentile reading score; and b) the percentage reaching Level 4 or above in Key Stage English. Although average performance levels are lower in NLP schools at each point in time (which is taken account of in the regres-

sion approach) an interesting pattern emerges. In “before and after” terms, there is clear evidence of improvement in the NLP schools, compared with the control group.

For reading, the mean score goes up 2.1 percentile points in the NLP schools and falls by 1.1 in the control group. The same relative pattern of improvement is seen for KS2 English, where the percentage of pupils attaining Level 4 or above rises by more in NLP schools (by 12.2 percentage points compared with 8.8 in the control group).

The lower part of the Table shows statistics on secondary school performance in GCSE English five years later. Currently, this can only be done for the 1997 cohort of NLP

The data

The empirical analysis is based on administrative records of pupil-level attainment and on school-level data. For pupils, the data consists of detailed information on educational attainment from when they were of age 11 and age 16. At age 11, all pupils in England are tested at the end of “Key Stage 2”. At age 16, exams at the end of “Key Stage 4” (i.e. GCSE or GNVQ) mark the end of a pupil’s compulsory education.

The first available year of national Key Stage 2 data for pupils is 1996, the school year before the National Literacy Project was introduced (we refer to school years according to when pupils took the exam – so “1996” refers to the 1995/96 school year). The NLP was introduced for two cohorts, in 1997 and 1998. Pupils within the first cohort finished their compulsory education in 2002. Hence, to evaluate the impact of the NLP on attainment at secondary school, we matched pupil records from 1996 (i.e. pre-NLP) and 1997 with GCSE/GNVQ attainment data in

2001 and 2002 respectively. (At the time of writing, we do not have data on 2003 GCSE results and, therefore, cannot perform the secondary school analysis for the second cohort of children affected by the NLP.) The pupil-level files have detailed information on attainment, gender and codes for the schools attended, which allows us to match national school-level data from the School Performance Tables and files from the LEA and School Information Service (LEASIS). We concentrate on two outcome measures at the end of primary school: the percentile reading score and the percentage of students attaining Level 4 or above in Key Stage 2 English. The second measure is a key policy indicator and is the standard deemed to be appropriate at age 11.

The NLP was introduced in some 400 schools, of which 80% were in inner cities – several LEAs in London and also in Sandwell, Liverpool, Manchester, Sheffield, Newcastle and Bristol. NLP schools represented in

total about 40% of all primary schools within these LEAs. The remaining NLP schools were run by three county councils (Hampshire, Essex and Norfolk), where they represented only about 7 % of all primary schools.

In order to establish a control group against which to measure the performance of NLP schools, we identified geographically adjacent LEAs not involved in the NLP. (If there was more than one, we chose that with the closest pre-policy performance profile.) Where we could find no close control comparison for an NLP authority, it was dropped from our sample. This affected the county councils and Bristol, where the city is completely surrounded by semi-rural areas. However, our sample comprises 72% of all NLP schools in England.

As a robustness check, we have also estimated regressions for a control group consisting of all other maintained schools in England.

The data allow us to control for differences in schools

Table 1. Descriptive statistics

A. Primary school attainment	NLP Schools				Control LEA schools			
	1996	1997	1998	change 1996-98	1996	1997	1998	change 1996-98
Percentile reading score	44.4	45.3	46.5	2.1 (.8)	53.9	53.2	52.8	-1.1 (.5)
% reaching Level 4 or above in KS2 English	37.3	47.6	49.5	12.2 (.9)	50.5	57.8	59.3	8.8 (.6)
No. of pupils	12645	12586	12814		22461	21976	22172	
No. of schools	283	284	283		553	551	547	

B. Secondary school attainment	NLP Schools			Control LEA schools		
	2001	2002	change 2001-02	2001	2002	change 2001-02
Percentage with GCSE Grade A*-C in English	38.7	42.1	3.4 (1.1)	47.3	48.4	1.1 (.6)
No. of pupils	5142	5167		18956	19553	
No. of schools	147	145		549	551	

Notes: Panel A covers cohorts 1 and 2 of NLP, while Panel B only considers cohort 1 (due to lack of GCSE data for 2003). Standard errors in parentheses.

schools, which only had one year of exposure to the literacy hour. Again, the changes are larger in the NLP schools, with the figures going up by 3.4 percentage points as compared with 1.1 percentage points in the control schools.

Our analysis, of course, needs to allow for differences in the characteristics of schools and the data allow us to control for a large number of factors. These include information on outcomes (e.g. results, absences), inputs (e.g. pupil-teacher ratios), social disadvantage (e.g. percentage of students eligible for free school meals or with special educational needs) and type of school (e.g. single sex, grammar). A full account of the methodology will be found in our forthcoming CEE Discussion Paper.

Taken as a whole, the results of our regression analysis strongly corroborate the view that the literacy hour under the NLP significantly raised pupil performance in the primary schools that were exposed to it. Furthermore, for the first cohort of children exposed to the literacy hour, there is a positive and statistically significant effect of the policy on GCSE results in English at age 16.

We were also interested to see whether the literacy hour had a differential impact on boys and girls. Boys have traditionally performed worse than girls in literacy-related activi-

ties. For example, in 1996 (the year before the NLP was introduced) only 49% of boys achieved Level 4 or above in KS2 English, compared with 64% of girls (see Table 2). If it is correct that boys have a greater problem than girls with concentration and focus, it might be expected that the NLP would benefit them more.

We do indeed find such a gender difference in the NLP's impact at primary school. For reading, the literacy hour raised boys' mean percentile scores by somewhere between 2.5 and 3.4 percentile points. The probability of achieving Level 4 or above in KS2 English was up by between 2.7 and 4.2% for boys. Effects for girls were considerably smaller and not always statistically significant. Hence the NLP had a large impact on the oft-cited gender gap in literacy.

It is interesting to put this finding for the 1997 cohort against the national figures for attainment in English given in Table 2. It is evident that the gender gap in primary school reading and English has reduced in recent years. Our findings are entirely consistent with the literacy hour having continued to play an important role since the National Literacy Strategy was introduced.

The question remains as to whether the policy was cost

Scores for boys improved more than for girls

Table 2. Primary and secondary school English attainment 1966-2002

A. Primary school attainment

% Pupils achieving Level 4 and above in Key Stage 2 English								
	1996	1997	1998	1999	2000	2001	2002	Change % points
	%	%	%	%	%	%	%	1996-2002
All	57	63	65	71	75	75	75	18
Boys	50	57	57	65	70	70	70	20
Girls	65	70	73	76	79	80	79	14

% Pupils achieving Level 4 and above in Key Stage 2 Reading								
	1996	1997	1998	1999	2000	2001	2002	Change % points
								1997-2002
All	n/a	67	71	78	83	82	80	13
Boys	n/a	63	64	75	80	78	77	14
Girls	n/a	71	79	82	86	85	83	12

B. Secondary school attainment

% Pupils achieving Grade C or above GCSE English								
	1996	1997	1998	1999	2000	2001	2002	Change % points
								1996-2002
All	49	52	51	53	54	59	56	7
Boys	40	43	42	45	46	51	48	8
Girls	58	61	59	61	62	66	64	6

Note: Data from DFES national statistics.

effective. We try to answer this by comparing the per pupil costs of the policy with the economic benefits, as reflected in predicted labour market earnings.

The main costs of the NLP were 14 local centres (each about £25,000 a year) and literacy consultants in each participating Local Education Authority (about £27,000 a year for each consultant). Schools also received some funding for teacher training and resources, which was broadly the same for each school (though some account was taken of the pupil-teacher ratio). However, since the National Literacy Strategy was introduced two years after the NLP, only the first two years of the original £12.5 million five-year programme are relevant. The total cost per annum was thus £2.5 million (or about £2.8 million in 2001 prices). The cost per pupil involved was just over £25 a year.

It might be argued that the literacy hour takes teaching effort and resources away from other subjects and that this indirect cost effect (via substitution) should be taken account of in a cost-benefit calculation. However, literacy was being taught in some form before the policy for the same kind of time. Therefore, the literacy hour represents a change in how reading and writing are taught, rather than an increase in the time devoted to the subject. There are also likely to be positive spillovers between pupil subject areas and associated teacher practice.

First, since the ability to read and write are important generic skills, an improvement in how these skills are taught might lead to improved performance in other subjects. Secondly, the literacy hour is likely to have caused teachers to re-evaluate their teaching methods in other subjects. This is important in English primary schools because, generally, pupils within a particular year group are taught every subject by the same teacher. We do indeed find some evidence linking the literacy hour to higher levels of achievement in Mathematics. Thus, if anything, the effects of the NLP are likely to be underestimated in our approach.

To estimate benefits of the policy we investigated the impact of reading scores on future labour market earnings, using the British Cohort Study. This is a panel survey of all those living in Great Britain born between 5 and 11 April 1970. We regressed the log of labour market earnings (at age 30, in 2000) on age 10 percentile reading scores (from 1980). We then include controls for various factors, like gender, region, family background and highest educational qualification achieved by age 30. Since the educational qualification variable is likely to partly capture the effect of the reading score, the effect of reading on labour market earnings is likely to be an underestimate when this variable is included.

These estimates are inevitably somewhat broad brush. But,

Cost per pupil was just over £25 a year

assuming that the pupil goes on to work from age 20 to 65 and using a discount rate of 3%, we estimate under a number of realistic assumptions the present discounted value of the cumulative effect of the literacy hour to be somewhere between £2,000 and £5,500.

Whichever way one looks at it, the benefits of the literacy hour seem to be large and the costs small. These findings are of considerable significance to the wider debate about what works best and most cost effectively for improving pupil performance.

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This article is based on research that will be published in a forthcoming CEE Discussion Paper.

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Meeting the ICT challenge

Like the UK, Germany is facing educational challenges over information technology. Hilary Steedman, Karin Wagner and Jim Foreman look at the two countries' contrasting responses.

Credit is usually given to "Leo", the business computer device constructed by J. Lyons & Co, the catering and food company, in the early 1950s, for being the first practical application of information and communication technology (ICT) in Britain. But the new communication and faster information retrieval and manipulation possibilities for business did not really open up until the early 1990s, with the advent of in-house networking and faster and more powerful electronic communication, including direct communication between data capture and data manipulation devices.

The extent to which the potential of these technologies was exploited for the automation of business and manufacturing processes in advanced industrialised countries was undoubtedly driven by the heightened competitive environment of the last quarter of the 20th century. Entirely new types of economic activity, for example software develop-

ment and, more recently, web page design and web server support, assumed much greater relative weight. More established sectors of economic activity – for example, retailing, financial services and manufacturing – increased investment in ICT and consequently expanded ICT-related employment. The OECD estimates that employment in computer and related activities in the UK was 115% higher in 1999 than ten years earlier.

Using an occupational measure developed for the Council of European Professional Informatics Societies (CEPIS) in 2002, Britain now has some 850,000 ICT practitioners, considerably more than the 550,000 in Germany. In Germany, ICT practitioners are 1.45% of total employment and 2.1% of service employment. In Britain the corresponding figures are 2.33% and 3.1% respectively.

The research report on which this article is based analysed the contrasting British and German national strategies for



Britain now has some 850,000 ICT practitioners

the supply of ICT skills and examined their impact on the companies engaged in the industry. Some 90 firms in Britain and Germany were interviewed, selected at random from four sectors – financial services, retailing, motor manufacture and software development.

The requirements of the ICT industries in each country seem to be similar, but the British and the German higher education (HE) systems are organised in diverse ways and, therefore, the supply by the educational system differs considerably. For example, in 2001 the output of computer science graduates from German universities and applied universities (Fachhochschulen) was in the region of 6,000. In Britain that year some 20,000 computer science graduates left university with two-year diplomas, first degrees or postgraduate qualifications.

The low annual output of ICT graduates in Germany reflects the long lead times and high drop out rates typical of the German higher education system. Numbers in the system have now expanded, but the increase in supply will not come through for some years. In Britain, by contrast, shorter courses and low drop out rates have helped the steady increase in the supply of ICT graduates.

These low numbers of computer science graduates have had an important impact on the skill supply strategies of German companies. They pay higher starting salaries to graduates than their British counterparts, yet still have concerns about supply. The pool of ICT contractors available to German companies is smaller than in Britain, probably reflecting the relative scarcity of qualified graduates.

The German language is, of course, a barrier to the employment of non-German speakers in ICT occupations, even

though English is the working language of ICT. Employees still need to communicate with colleagues and customers and to fit into the working environment. As a result, German companies consider that they are losing out to competitors in Anglo-Saxon countries, who can attract good ICT practitioners from abroad.

An important advantage of the British system is the flexibility to move from a first degree to a postgraduate course. At this point it is possible to change subjects. It is also open to those with a first degree and some years of work experience to return to university for one- or two-year courses leading to a Masters degree or other postgraduate qualification.

This flexibility is not available in Germany, where courses at the traditional and applied universities (FHS) are parallel and take at least four years. Changeover between subjects is cumbersome and rarely occurs. The newly designed German Bachelor and Master courses will eventually make changing subjects easier and lead to a higher graduate output. But their impact so far has been negligible.

A clear advantage of the German system, however, is the requirement for internships as part of the FHS courses. It leads to early contact of students with companies and provides relevant experience of the world of work, which helps the subsequent recruitment process greatly. This also reduces the training costs for the company.

Within higher education, in Germany the traditional apprenticeship system has long held a position of higher esteem than in Britain. However, there has been recent questioning of its continuing relevance to ICT companies, working as they are with intense global competitive pressures and a high premium on flexibility and adaptability. The argument is whether the traditional concepts underlying an apprenticeship linked to a particular trade or profession (*Beruf*), defined in terms of the individual's status in relation to other employees and his or her "ownership" of defined areas of skill and action, were compatible with the less hierarchical cooperation across traditional boundaries required in the new industries. Thus, when the decision was taken in 1997 to establish four new apprenticeship occupations in the ICT field, this was widely perceived as a test of the "innovative potential" of the German "dual" system.

The new qualifications were developed in about a year, in contrast to the accepted wisdom that the development of apprentice qualifications was an inevitably lengthy and cumbersome procedure. Four occupations were identified and the programmes sought to ensure that apprentices acquire relevant and cutting-edge skills and competences. The training programme is composed of core competences and optional elements, which allow for specialised training relevant to the apprentice's training firm.

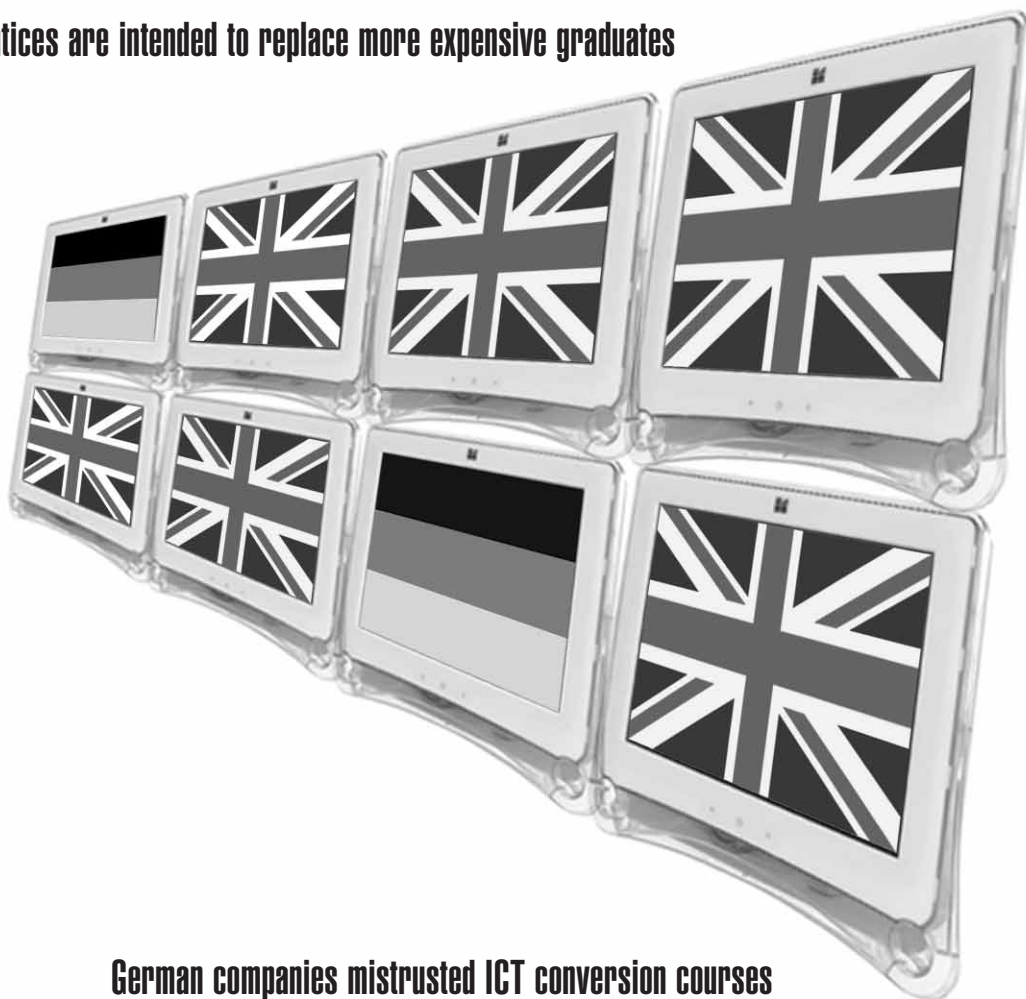
German employers were clear from the outset that one aim of promoting apprenticeships was to produce the skills that companies required at a lower cost. The apprenticeship system was intended to replace more expensive graduates from the higher education system.

While in training, German apprentices are paid about one third of the full rate for the occupation involved. Our data on salary levels confirmed that qualified apprentices in ITC

companies are earning about two thirds of the pay of graduates. Many of the German companies we interviewed with apprentices in training expected that they would undertake tasks similar to those carried out by graduate recruits. Some hoped to develop a core of personnel that did not aim for fast promotion and would provide stability at the base of the firm. They seemed confident that, provided apprentices continued training and study, they would play a significant part in combating future skill shortages.

In this respect there is a huge contrast between employers' enthusiasm for apprenticeship in Germany and the almost total disdain shown by ICT employers for the Modern Apprenticeship scheme in Britain. In 2001, fewer than 1,000 young people started a technical ICT apprenticeship in Britain, compared with some 20,000 in Germany. This is despite the fact that the ICT Modern Apprenticeship was established in Britain in 1995, two years before the four German ICT apprenticeships began.

German apprentices are intended to replace more expensive graduates



German companies mistrusted ICT conversion courses

The explanation does not seem to lie in differing standards. Our evidence is that a good Modern Apprentice in Britain, capable of attaining NVQ Level 3, could cope with most of the demands of the equivalent German apprenticeship.

British ITC companies' neglect of apprenticeships cannot be explained by arguing that they do not need or use intermediate skills. Only some two thirds of those employed in ICT in Britain are educated to degree level. Many of the companies we visited in Britain, in particular those in the "user" sectors, recruited young people with A level qualifications and then devoted a considerable proportion of their own resources to training them in ICT occupations.

British companies undoubtedly suffer from "information failure" in relation to apprenticeships. Hardly any of those we spoke to had heard of the Modern Apprenticeship scheme and we, therefore, could not explore with them their reasons for not making use of it. By contrast, the German managers we spoke to were familiar with the new German ICT apprenticeship schemes, no doubt because of extensive campaigns about them by the German government and their Chambers of Commerce.

One important difference between the two countries is that far fewer Germans aspire to go to university and, therefore, the available pool of able candidates for appren-



Far fewer Germans aspire to go to university

ticeships is greater. In Germany, two thirds of young people expect to enter apprenticeships, though around 20% of these will in fact go to universities or FHS. In Britain, 50% of the same age cohort is now aiming for university via the A level route. The potential apprenticeship pool in Britain is further reduced by companies that recruit young people with A level qualifications directly to their own training schemes. There is also anecdotal evidence that British companies that have taken on ICT apprentices have found the assessment and certification procedures to be burdensome and costly.

British and German ICT companies have responded differently to the recruitment market facing them. We found British companies paid little attention to the degree qualifications of those they recruited, provided that they had sufficient previous experience. We were told that "the last three jobs" were all that really counted when it came to the recruitment decision. Graduates taken on as their first job could have a wide range of first degree, not just in ICT or cognate disciplines.

This approach obviously widened the pool of potential recruits, but led at the same time to problems in narrowing down applications and identifying good applicants. British companies used recruitment agencies to help them here and incurred significant costs as a result. However, this approach probably means that they are less affected by skills shortages than their German counterparts.

German companies were less flexible in their recruitment policies. They mostly mistrusted applicants that has been through ICT "conversion courses", even when they had a first degree. As in Britain, companies went for a mixture of graduate and non-graduate recruits. But their graduates came almost exclusively from ICT or closely cognate disciplines. This inevitably restricted the pool of potential recruits. German companies spend longer themselves identifying requisite skills in candidates and rarely used employment agencies.

We had the strong impression that German companies expected university and FHS graduates to become fully effective at a relative high level within a short time. Certainly, German companies supplied less off-the-job training to new graduate recruits than did the British. Most learning was on-the-job through projects, backed by short seminars. It was rare for German companies to invest in graduate recruitment programmes of the sort found in Britain to recruit potential top managers. Having come through the German university education system, however, German graduate recruits were likely to be considerably older at 28 or more.

German companies' views on how university education could be improved from their point of view were more consistent than the views of British companies. Almost unanimously they thought that university students did not have enough experience of the real world, particular of the realities of the business environment. FHS students were recognised as having followed more practical courses, but graduates from the traditional universities, in particular those with PhDs, were described as suffering from "work shock".

Some British companies were "very satisfied" with the graduates they were recruiting. Arts graduates were appreciated for having better communication and "soft" skills. Lack of communication skills was often identified as a weakness in ICT graduates. Around half the comments recorded echoed the German complaints about lack of awareness of the business environment.

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This article is based on their study for the Anglo-German Foundation "ICT skills in the UK and Germany: how companies adapt and react", published in September 2003, which can be downloaded at <http://www.agf.org.uk/pubs/publications.shtml>
A fuller account of the research is contained in the CEP's Discussion Paper No. 575, which can also be downloaded at <http://cep.lse.ac.uk/pubs/dp.asp?prog=CEPDP&pubyear=2003> .

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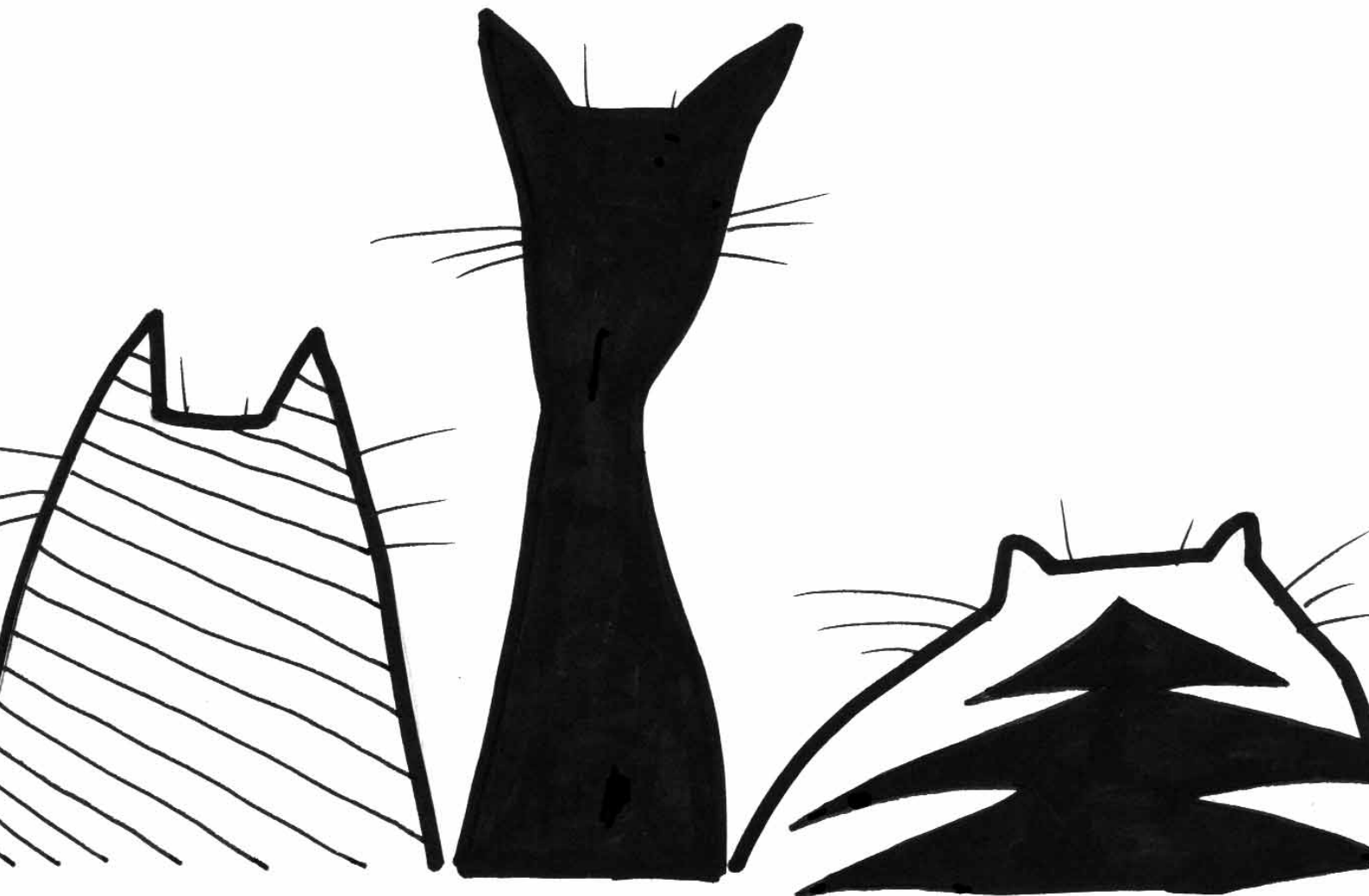
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Value for money

David Marsden looks at the record of performance related pay in the public sector.

There is a paradox to be explained concerning the spread of performance-related pay (PRP) in the British public services. It has been common to associate the introduction of PRP with the aim of improving incentives and motivation among public employees. Starting in the late 1980s, the British public services embarked on the most systematic and sustained policy of extending and developing performance-related pay of any OECD country, mostly replacing annual seniority-related pay increments with performance-related ones based on goal setting and appraisals by line managers.

Nevertheless, after surveying both academic research findings and inside management information, the government's Makinson report concluded in 2002 that performance pay had not motivated public employees in Britain and that its operation had been divisive. Given that the policy has been sustained by three successive prime ministers of quite different political persuasion – Margaret Thatcher, John Major and Tony Blair – as well as successive top public service managers, its continued use cannot plausibly be explained by political dogma. Likewise, in the face of such evidence, the perseverance of top public management and of successive governments with PRP is hard to understand, if employee motivation is the main story. We need to look elsewhere for an explanation.

An alternative explanation can be found in the use of performance pay (and of performance management more widely) to provide a framework for *renegotiating* performance standards with employees. This is consistent both with rising organisational performance, which would explain top management's perseverance, and with all the evidence that PRP has failed to motivate many public employees.

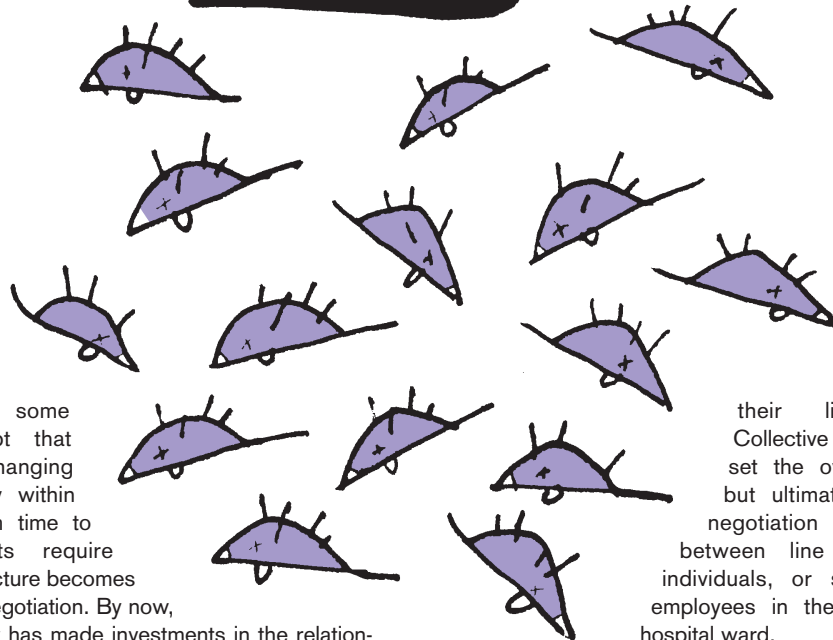
It has been common to analyse the workings of PRP through the lenses of three main theories: agency, expectancy, and goal setting. These theories shed much light on the *static* incentive and appraisal processes present in PRP. They have focused mainly on how management can influence employees' choice between different levels of effort or care in their work for a *given* set of performance norms. To understand what has happened with PRP in the British public services, however, one needs to complement the perspective provided by these theories with a more *dynamic* analysis of inducements for employees to agree to, and work within, a new set of performance norms.

The idea of *renegotiation* is most simply explained in terms of contract theory. A worker and a firm agree to the terms of their exchange when the worker is hired. A key feature of the employment contract is that it should be open-ended in terms of both its duration and its content. Workers agree to

Employee motivation is not the main story



Revision becomes an occasion for renegotiation



give management some flexibility to adapt that content to changing demands, but only within certain limits. From time to time, these limits require revision. Such a juncture becomes an occasion for renegotiation. By now, however, each party has made investments in the relationship and is vulnerable to pressure tactics from the other. Much of the contract literature emphasises pay, because of changes in the market valuation of employee output. Less visible, but just as important for management, is its ability to revise job boundaries and to redefine the nature and standards of performance that it requires from employees. These standards, which may include qualitative aspects of performance, are usually the subject of a tacit understanding between staff and management, sometimes called the "effort bargain".

By what processes does renegotiation come about? Many recent studies have focused on the role here of collective bargaining. Their main interest, however, has been in pay adjustments. Pay rules are generally codified by virtue of their inclusion in collective agreements and individual contracts of employment. In contrast, many of the rules relating to workers' job boundaries and performance standards contain a large uncoded element. It is common for jobs to deviate considerably from their formal job descriptions. The features of a given job are therefore accessible to higher management only through the eyes of first-line managers. To renegotiate performance, management needs to get right down to the level of individual jobs and to the relationship between individual employees and

their line managers. Collective agreements often set the overall framework, but ultimately this kind of negotiation has to occur between line managers and individuals, or small groups of employees in the same office or hospital ward.

At the time of hiring, workers who do not like the supervisory practices and incentive systems that the employer offers can just walk away, so there is a process of self-selection matching these job features to workers' preferences. However, when the time comes for changing work practices and incentive systems in an established organisation, the employer faces an incumbent work force whose preferences for or against the new system may vary considerably. In the change, some will expect to be winners and others losers. To get everyone to engage positively in the new system, management would have to offer a very attractive and costly deal. It might, therefore, prefer to make the new deal attractive to a sufficient proportion of its staff, so that the scheme functions tolerably well, and to forego the support of the remaining staff in order to keep within some budgetary limit.

So the "renegotiation" explanation leads us to expect any net performance improvements in this study to depend on the combined effects of the move to new work norms and the attractiveness of the incentives provided by the new PRP system. However, neither effect is uniform across all employees. Some will be positively attracted to the new deal, which comprises both new norms and new incentives.

They are likely to be motivated and to deliver higher performance. Others may resent the new arrangements and not find the pay scheme motivating. Nevertheless, their lack of motivation may not necessarily translate into a decline in their performance. Such employees must weigh the benefits of accepting the new scheme against the costs of finding an alternative. They may not like the new system, but they may still choose to work within it because changing jobs is not worth their while and they do not wish to be dismissed.

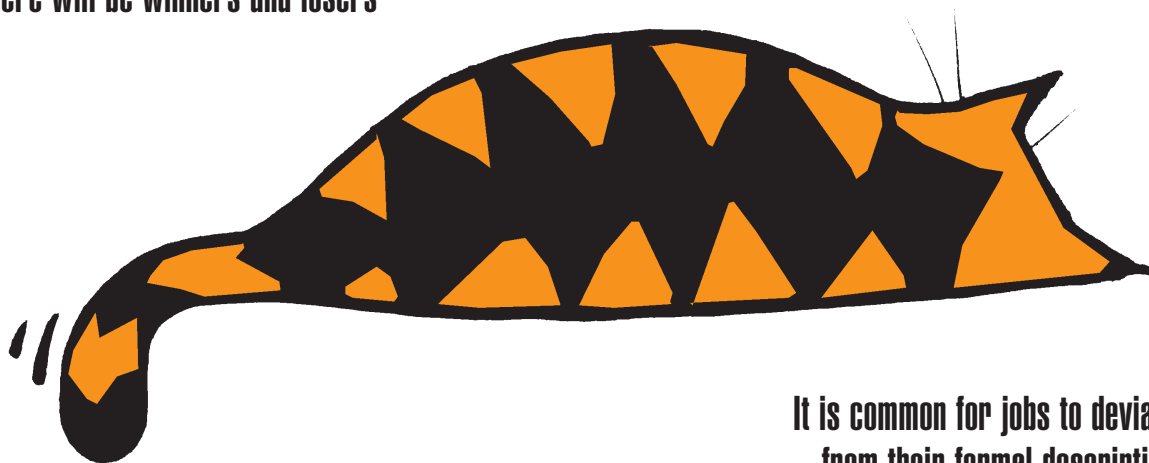
The greater management attention to goal setting and performance appraisal that accompanies PRP is likely to increase the effectiveness with which the new work norms are monitored and discourage reduced performance. Provided performance of the discontented does not fall too much, the organisation may still benefit from the increased performance of those who engage positively, assuming they do so in sufficient numbers.

In this reading, renegotiation and incentive can be complementary functions of PRP. One can say that the incentive mechanisms and, particularly, the goal-setting mechanisms have to be working properly for PRP to be an effective means of changing work norms. Agency theory also provides a picture of the static functions of PRP. It explains how performance and output incentives encourage employees to work hard (and not to "shirk"), even when manage-

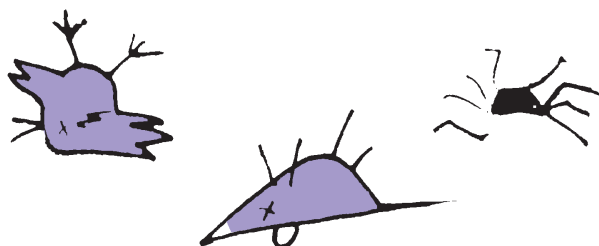
ment finds it costly to monitor their effort closely. It suggests that management can respond by tying pay to output so as to induce employees to choose a higher level of effort and also, by investing in better systems of work design and performance evaluation, to improve the correlation between performance measures and effort, thus strengthening incentive effects. It also warns against the dysfunctions of inappropriate incentives, such as individual incentives that discourage cooperation among colleagues.

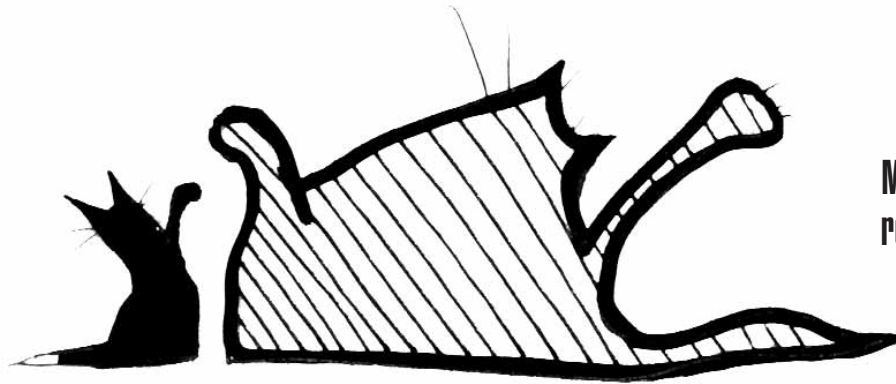
Expectancy theory, like agency theory, treats employees as having a degree of choice and places a strong emphasis on the motivational effects of incentives and on the problems posed by poorly defined targets. Simplifying somewhat, it identifies a potentially virtuous circle. Employees will respond to the incentive or reward on offer if they value it (*valence*), if they believe good performance will be instrumental in bringing the desired reward (*instrumentality*) and if they expect their efforts will achieve the desired performance (*expectancy*). The circle of valence-instrumentality-expectancy can be broken at a number of points. Employees may feel they lack scope to increase their effort, or that their effort will make little difference to their performance. This undermines expectancy. They may believe that management lacks the competence or the good faith to evaluate and reward their performance fairly, a view that undermines instrumentality. Applying these considerations to renegotiation, one can see that employees are more likely

There will be winners and losers

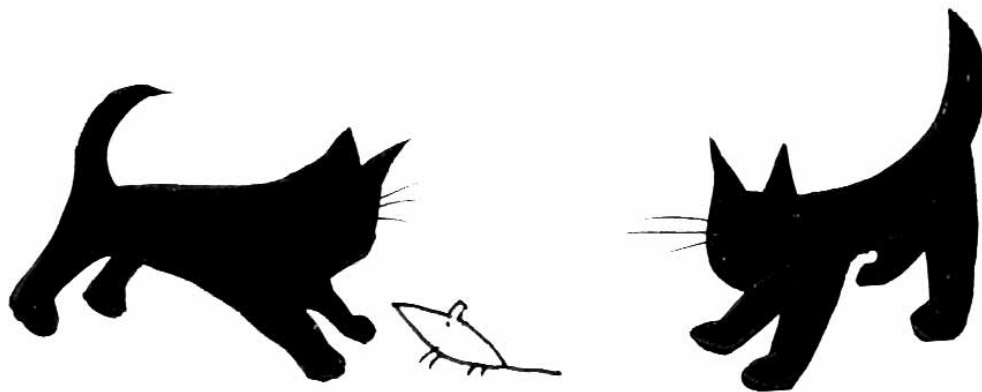


It is common for jobs to deviate from their formal description





**Management can
respond by tying
pay to output**



to buy into a new incentive scheme when they perceive it as operating fairly and able to deliver the promised rewards.

Goal-setting theory places less emphasis on rewards and stresses the motivating power of defining appropriate work goals and engaging employee commitment to them. Of special relevance in the current context is its emphasis on dialogue between line managers and employees to exchange information about realistic goals and on agreeing to them, so that employees adopt them as their own. This framework already contains the germs of a negotiation process between employees and their managers. So it is easy to see how the basic idea can be applied in the context of renegotiating performance norms. Goal setting may be especially important for the employees who do not like the new system, but still prefer not to change jobs. In such cases, it provides management with a channel to clarify the new standards and establish agreed levels of compliance. Thus, although the last three approaches – agency, expectancy and goal setting – differ in emphasis, they point to the same key processes and variables for the analysis of performance pay systems: reward and motivation on the one hand and goal definition and evaluation on the other.

My argument is that the main impact of the introduction of PRP across large sections of the British public services during the 1990s was to facilitate the renegotiation of performance norms. When introducing a new incentive scheme to an established work force, management is almost certain to encounter a wide spread of employee preferences and the problem of winners and losers. Thus, even when a scheme is well designed and managers are well prepared to operate it, there will frequently be not only

employees who respond favorably and agree to the new norms, but also others who resent the norms and consider themselves worse off. Whereas the former are positively motivated to improve or adapt their performance, the latter are not and managers hold them to the new performance norms by means of goal setting and appraisal. In this way, one can explain why successive governments and top managers have believed in the merits of PRP for the public services despite the evidence – of which they were certainly aware – that many employees saw little incentive and much divisiveness in them.

To some extent, renegotiation has emerged as a latent rather than an explicitly stated goal of PRP in the public services. When senior managers at the Inland Revenue were asked in 1991 about the goals of the PRP scheme they operated then, they responded in terms of motivation. Likewise, officials of the union representing Inland Revenue staff had encouraged their members to complete the questionnaires because they expected the survey to demonstrate publicly what they already knew: that the scheme was not motivating staff. The second Inland Revenue scheme, introduced in 1993, did not speak of renegotiation, but used the language of agreeing to objectives and establishing a “contract” with individual employees and of relating these to the department’s operating plans.

This is where contract theory, and some of the older industrial relations literature, may prove helpful in understanding what is going on. Unions and their workplace representatives may be weaker now than in years past, but the labour market continues to confer sometimes considerable individ-

ual bargaining power on workers. Of course, a large organisation can always face down an individual worker, no matter how skilled or talented, but it cannot afford a gradual bleeding away of its skilled personnel. It is not possible for a management just to impose its optimal design. It has to negotiate its way to an approximation of that design and, in so doing, to respect the various budgetary and efficiency constraints it must satisfy to meet its own objectives.

In his 1999 *Journal of Economic Literature* review of work on incentives, Canice Prendergast commented on the need to extend the study of incentives beyond CEOs, sales personnel and sports stars. Such people often have short job tenures and their high rate of labour turnover means that self-selection often brings about a match between employee preferences and the type of incentive offered by the organisation. The public service has highlighted the opposite problem, where high labour stability, especially during the early to mid-1990s, meant that employers had to obtain results from new incentive schemes when implementing them for a large incumbent work force.

The public services' experience of PRP has also highlighted the key role of line managers. They are essential to the renegotiation process because they are the link between top management's goals and the way ordinary staff carry out their jobs. This introduces another layer in the principal-agent analysis of incentives. Line managers' abilities and interests are not identical to those of top management and they have no protective gatekeepers controlling staff access to them. When agreeing to performance objectives with individual staff, the pressures on them to be lenient are great. What seems to have kept these pressures mostly at bay has been the articulation between performance objectives at different levels within the public organisations. This has provided support to line managers and given them the means to keep a focus on broader organisational performance when establishing individual objectives.

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This article is based on the data from a series of attitude surveys of employees and line managers in six areas of the public service: the Inland Revenue, the Employment Service, two NHS trust hospitals and head teachers in primary and secondary schools. A fuller article, including an extended discussion of the data, will be published in the *Industrial and Labor Relations Review* in April.

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How to score goals

Riccardo Peccei, Helen Bewley, Howard Gospel and Paul Willman
look at the effects of disclosure of information to employees.

Disclosure of information by firms to their employees has been widely accepted by academics as good management practice, resulting in higher employee satisfaction and commitment and, thereby, to better organisational performance. In the past, there has been no general requirement in this country for firms to disclose such information, though there are broad requirements in specific areas, such as health and safety. But now the European Directive on Information and Consultation has introduced such a general requirement, which will progressively come into force from early next year onwards.

We still, in fact, know little about the effects of disclosure on the performance of firms. Such empirical work as has been done specifically on the organisational, as opposed to individual, outcomes of disclosure, for example in the United States and Japan, has been somewhat contradictory. So, in this research, we used the 1998 Workplace Employee Relations Survey (WERS98) for the UK to test competing explanations of the impact of information disclosure on two measures of organisational performance: labour productivity and product/service quality.

One argument is that it is good management practice, bringing benefits to the firm, to keep employees informed on a range of issues relating to their jobs and broader organisational matters. Within the literature this idea is often embedded in wider arguments about the impact of "high commitment", "high involvement", or "high performance" human resource (HR) practices. This is not the place for a detailed review of that literature, but two points about it should be noted.

The first point is that studies in this area do not, by and large, make a clear distinction between process and content: between the various communication mechanisms used in organisations and the actual information disclosed to employees. Even the few studies that focus explicitly on the content of what is disclosed often treat it as part of a broader bundle of HR practices, rather than look at the impact that disclosure itself has on outcomes.

Our specific interest here is in the extent to which management disclosure of different types of information to employees, either directly or through their representatives, affects

key aspects of organisational performance. We focused on the disclosure of three main types of information to employees at the level of the establishment: (1) the overall financial and staffing position of the establishment; (2) specific production, quality and operational targets set for the

[NOT SECRET]

establishment; and (3) feedback on the achievement of these targets.

A further interest is in the theoretical links between information disclosure and performance outcomes. Central to the HRM literature is the idea that information disclosure contributes to organisational performance by helping to align individual and organisational goals and by helping to enhance general levels of employee identification and integration at work. The theory, in other words, is that the development of organisational commitment (OC) has a positive impact on organisational performance by increasing employees' willingness to exert effort on the job and to behave at work in ways that benefit the organisation.

There may be other factors than higher organisational commitment that help to account for the positive effects of disclosure in performance. Goal-setting theory, for example, suggests that providing employees with systematic information about performance targets and providing feedback on the achievement of goals can help to heighten motivation and focus employee effort. Similarly, certain strands of job design theory suggest that providing employees with fuller information about their work environment, including the position and operation of the organisation, may help to enhance the meaningfulness of work, thereby contributing to employee motivation and, ultimately, to performance.

These are two "universalistic" theories of how information disclosure to employees can have a positive effect of performance, one working through higher organisational commitment and the other not. Some academics, however, have argued that the impact of information disclosure on organisational performance is likely to be "contingent" on a series of other factors. Thus it may be affected by levels of organisational commitment. In addition, Kleiner and Bouillon found that, in the US, the provision of information by firms was positively correlated to the level of employee benefits and wages, but not to productivity. In Japan, however, Morishima found that information disclosure was related negatively with labour costs but positively with profitability and productivity.

Such contrasting results may be attributable to differences in study methods or sampling, or to institutional arrangements, or to cultural differences between the US and Japan. However, following Kleiner and Bouillon, Morishima formulates a theoretical explanation in terms of the underlying negotiating games between employers and employees. The first (Japanese) game involves "goal alignment", in which disclosure operates to bring the parties closer together on the basis of shared understanding and information in what one might broadly characterise as "integrative bargaining". The second (US) game, based on asymmetry of information, essentially involves bargaining over residual rents and is characterised by "distributive bargaining".

[UNCLASSIFIED]

In the Japanese case one might expect higher levels of disclosure to have a positive impact on the negotiating process and, perhaps, on production and financial performance. In the US case there are strong incentives for management to limit voluntary disclosure, because employees in possession of greater information simply use it to extract for themselves a greater share of residual rents, resulting in higher wages but lower profitability and also, possibly, lower productivity.

We build on these ideas and extend them to notions of organisational commitment. We treat the extent of workforce commitment to the organisation as a key factor that may affect the impact of information disclosure on performance outcomes. There are, however, different ways in which OC may moderate the impact of disclosure on outcomes. Here we focus on two possibilities.

The first possibility is that information disclosure has a positive impact on organisational performance only, or primarily, when levels of OC amongst the workforce are already high. This is because committed employees are more likely to use any additional information they obtain from management for the benefit of the organisation. Employees who are less committed are more likely either to ignore the information or to use it for their own benefit. When levels of commitment amongst the workforce are low, therefore, disclosure is likely to have either a negative or no effect on organisational performance.

The second possibility is that the benefits of disclosure are greater in situations where the workforce is less committed to the organisation. In this view, committed employees, unlike ones who exhibit low levels of OC, can already be expected to exert a high level of effort on behalf of their organisation, irrespective of the amount of information they are provided with by management. Here disclosure is likely to have less effect on their behaviour and performance than on that of less committed employees, who may interpret the increased provision of information as a sign of management goodwill and cooperation and reciprocate accordingly.

A final distinction might be made between unionised and non-unionised workplaces. To the extent that residual claims games and overt conflicts of interest are more likely in unionised than in non-unionised establishments, disclosure could be expected to have a generally more limited impact on performance outcomes in the former. By the

Methodology

The dataset used for the analysis is the WERS98 cross-section. This contains information on 2,191 British workplaces with 10 or more employees and consists of interviews with management, 918 workplace representatives and a survey of 28,215 employees. By weighting the data, the sample can be made representative of the population of British workplaces surveyed. Data from both management and employees were used in the present analysis. We controlled for variations between establishments in terms of size, sector and a range of other characteristics.

Probit, ordered probit and ordinary least squares models were fitted to the data, depending on the nature of the dependent variable under consideration and probability weights were used throughout. The sample was divided into union and non-union workplaces, depending on whether a union was recognised for the purpose of negotiating pay and conditions. Union strength was measured by whether union representatives negotiated with management at the establishment on nine issues (pay or conditions of employment, recruitment or selection of employees, training, payment systems, grievances handling, staffing or manpower planning, equal opportunities, health and safety, and performance appraisals). The sample mean on this variable was used to distinguish between strong and weak union contexts.

Our two main dependent variables (the overall level of workplace labour productivity and product/service quality) were derived from the WERS98 Management Questionnaire. This asked managers to rate their labour productivity and quality of the product/service on a 5-point scale, ranging from "A lot better than average" to "A lot below average". As these responses are not evenly distributed between the five categories, we considered whether the response was "above average",

"average", or "below average". It was then possible to fit a probit model to these two dependent variables.

Our main intervening variable was the average level of employee organisational commitment at the workplace (OC). This was measured with three items from the Employee Questionnaire. These asked respondents to rate, on a five-point "strongly disagree" to "strongly agree" Likert scale, the extent to which they shared the values of the organisation, their feeling of loyalty to the organisation and the extent to which they felt proud to tell people where they worked. Responses to the three items were first combined into an overall OC scale (coefficient alpha = .83) and then aggregated across each workplace to give a measure of average employee commitment within each establishment. An ordinary least squares model was then fitted to this intervening variable. In separate analyses, this measure of organisational commitment was also used as a predictor of labour productivity and product/service quality.

The three main variables for disclosure of information were all derived from the Management Questionnaire. Managers were asked whether they regularly gave employees or their representatives information about internal investment plans, the financial position of the establishment, or staffing plans. The variable for disclosure of general information was based on the responses to these three questions and indicates the total number of issues on which management shared information with employees. The variable for disclosure of performance targets measures the extent to which managers were prepared to supply operational-type information to employees or their representatives. Managers were asked whether they set targets for sales/fees/budgets, costs, profits, labour costs, productivity, product/service quality, labour turnover, absenteeism, and training. They were

further asked whether employees or employee representatives were informed of these targets. The variable for disclosure of targets was constructed from the responses to two similar questions, which asked managers whether they kept records on the same set of nine issues used to determine strength of union presence and whether they shared information on these records with employees. The variable for disclosure of performance results was constructed from these two questions to indicate those establishments that kept records on at least one of these issues and shared the information that they collected with employees.

To test the contingency hypotheses, three composite multiplicative variables were constructed from information in the WERS98 survey. To reduce multicollinearity, all the multiplicative interaction term variables were mean-centered. The first set comprised a series of contextual variables, including whether the workplace was in the private or public sector and the industrial sector in which the establishment operated. The second set comprised a number of key structural and industrial relations characteristics of the establishment, including its size and age, the gender and skill composition of the workforce, the extent of industrial conflict in the past year and whether a union was recognised for purposes of negotiating pay and conditions. The third set included a series of management variables, covering key areas of human resource policy and practice. These included whether the establishment had a strategic HR plan, whether it had a range of contingent pay, selection, communications, equal opportunities and family-friendly practices in place, and whether there was an emphasis on multiskilling and on decentralised job design. Relevant statistics for the control variables are available from the authors.

In theory, organisational commitment has a positive impact

same token, in unionised settings, the impact is likely to be weaker where unions are stronger.

Table 1 provides a summary of the core variables for "organisational commitment" and "information disclosure" used in our study to test our main "universalistic" and "contingency" hypotheses. These are shown for the sample as a whole and for union and non-union establishments separately. The extent of disclosure varied considerably, depending on the particular type of information involved. Thus management provided information on performance targets in 82% of establishments, but feedback on the achievement of targets in only 19%. The breakdown shows that management was significantly more likely to disclose all

types of information in union than in non-union establishments. In contrast, average levels of employees' organisational commitment tended to be significantly higher in non-union than in union workplaces.

The results of the regression analyses used to test the hypotheses are shown in Table 2. To save space, only the results for the sample as a whole are shown and the results for the control variables are not included in the Table. These results are available from the authors.

Equation 1 in Table 2 shows the impact of the three disclosure variables on organisational commitment, while equations 2 and 3 show the impact of both the disclosure

Table 1. Descriptive data

Percent of establishments where management disclosed:	Total sample	Non-union Sub-sample	Union Sub-sample
	%	%	%
Full range of general info.	40	33	60 ***
Performance targets info.	82	78	92 ***
Performance results info.	19	14	32 ***
Mean level of employee OC	3.62	3.64	3.57 ***
(N)	(937)	(444)	(493)

Note: *** Difference between non-union and union sub-samples significant at $p < .001$.

Table 2. Tests of hypotheses for total sample: regression results

Equation No.	1	2	3	4	5
Independent variables	OC	Labour prod.	Prod./serv. quality	Labour prod.	Prod./serv. quality
Disclosure of general information	-.007 (.028)	.027 (.087)	-.094 (.089)	.046 (.085)	-.087 (.087)
Disclosure of performance targets	.277*** (.079)	.033 (.237)	.338 (.240)	-.028 (.246)	.347 (.247)
Disclosure of performance results	-.027 (.066)	-.053 (.181)	.688*** (.178)	-.095 (.183)	.689*** (.175)
Org. commitment		.613*** (.199)	.113 (.203)	.624* (.199)	.160 (.194)
General info x OC				-.172* (.078)	-.079 (.084)
Perf. targets x OC				.007 (.069)	.061 (.064)
Perf. results x OC				.145* (.063)	-.064 (.068)
(N)	(937)	(937)	(937)	(937)	(937)

Notes: Standard errors in brackets. *** $p < .001$ ** $p < .01$ * $p < .05$

In Japan information disclosure was positively related to productivity

variables and OC together on labour productivity and product/service quality respectively. Taken together, these first three equations serve to test our “universalistic” hypotheses. Equations 4 and 5 are designed to assess the two “contingency” hypotheses by testing for possible moderator effects in the data. This was done by adding the interactions between the three disclosure variables and OC as predictors in the analysis to show the impact of the relevant interaction terms on labour productivity and product/service quality.

The results from equations 1, 2, and 3 are mixed, but provide at least partial support to both our “universalistic” hypotheses. Equation 1 shows that neither the disclosure of general information by management nor the provision of performance feedback had a significant effect on employee commitment. Equation 3 shows that, in turn, commitment was not significantly related to product/service quality. However, equation 1 shows that the disclosure of performance targets had a positive impact on employee commitment ($\beta = .277, p < .001$) and equation 3 shows that this, in turn, was positively related to labour productivity ($\beta = .688, p < .01$).

Similarly, equation 2 indicates that none of the information disclosure variables had a direct effect on labour productivity. In addition, equation 3 shows that neither the disclosure of general information nor the sharing of performance targets by management had a direct impact on

product/service quality. However, management provision of performance feedback to employees was found in equation 3 to have a significant direct positive effect on product/service quality ($\beta = .689, p < .001$).

The results are also mixed in relation to the “contingency” hypotheses, but again provide partial support for them. Only two of the interaction terms in equations 4 and 5 attained significance, both in relation to labour productivity. The interaction between performance feedback and OC in equation 4 is positive and significant ($\beta = .145, p < .05$), suggesting that performance feedback had a stronger positive effect on labour productivity in establishments where there were higher levels of employee commitment. The specific form of this interaction is shown in Figure 1.

In contrast, the interaction between management disclosure of general information and OC in equation 4 is negative ($\beta = -.172, p < .05$). This suggests that general disclosure had a more positive effect on labour productivity in establishments where there were lower levels of employee commitment. The specific form of the interaction is represented in Figure 2, showing that the relationship between disclosure and productivity in this case was shifted in a negative direction.

On the whole, therefore, management provision of general information to employees was found to be negatively and not positively related to productivity. However, this negative

Figure 1. Performance Feedback x OC Interaction For Labour Productivity

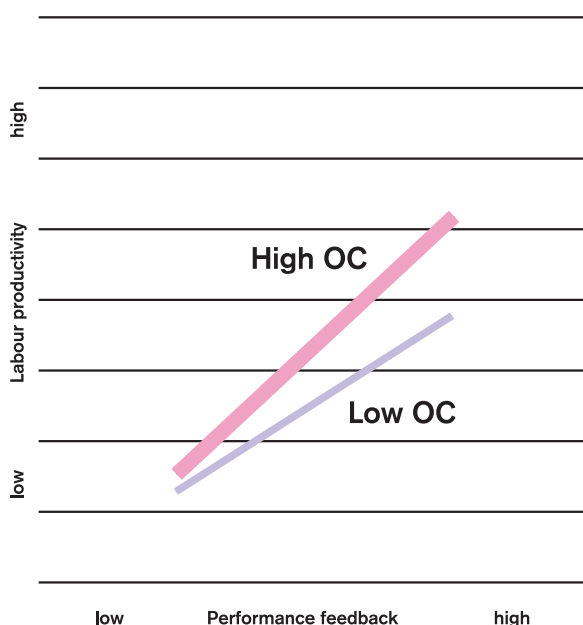


Figure 2. General Information x OC Interaction for Labour Productivity

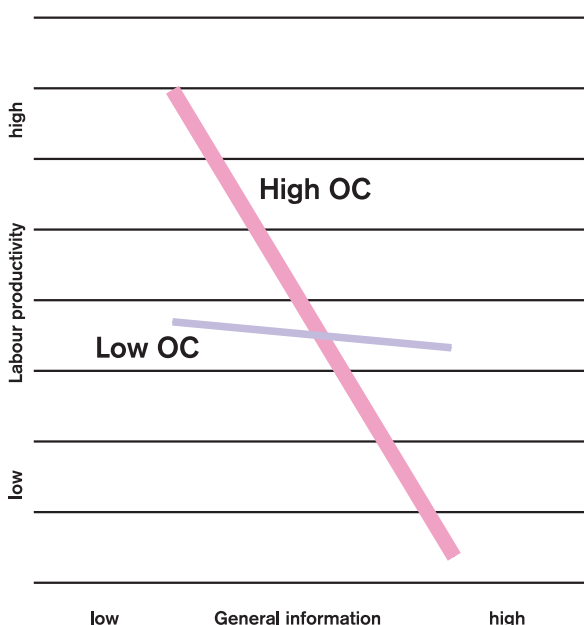
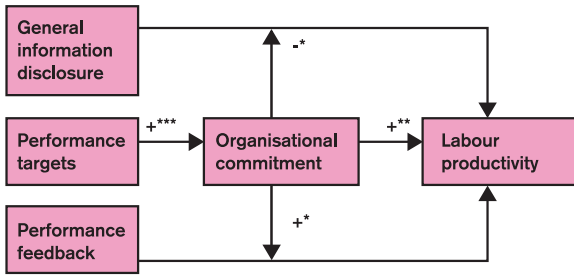
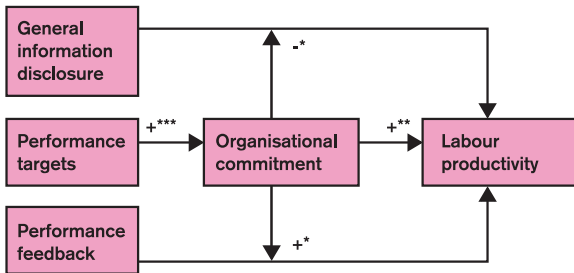


Figure 3. Schematic Summary of Regression Results
Labour productivity

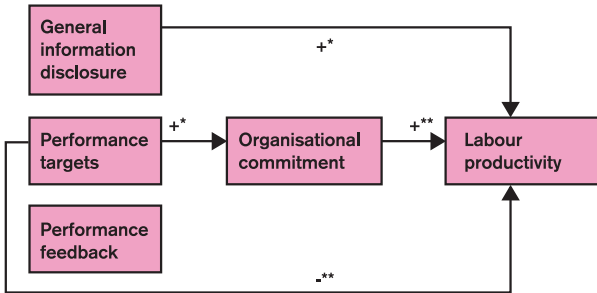
Total sample (a)



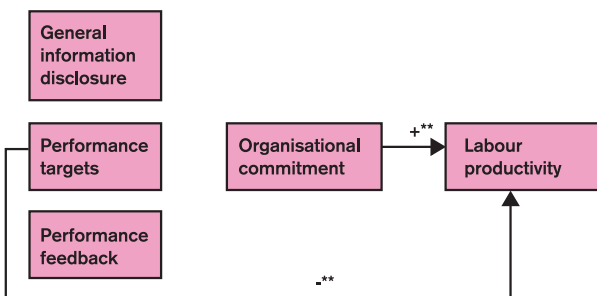
Non-union sample (c)



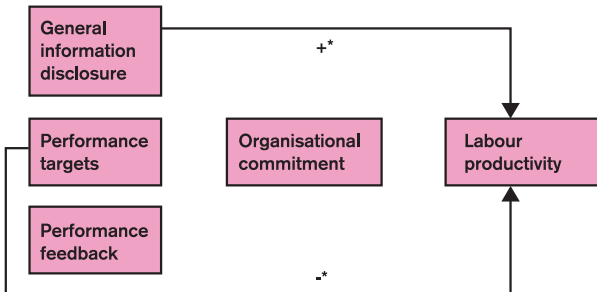
Union sample (e)



Weak union sample (g)

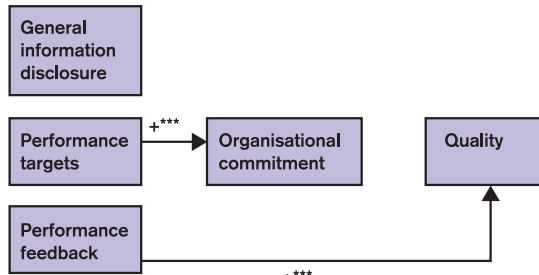


Strong Union sample (i)

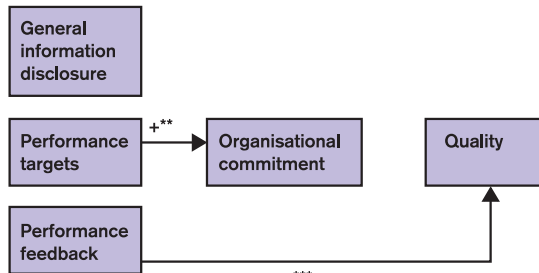


Quality

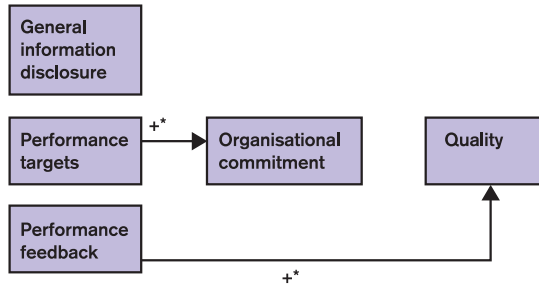
(b)



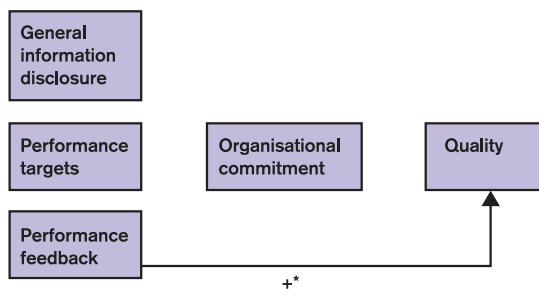
(d)



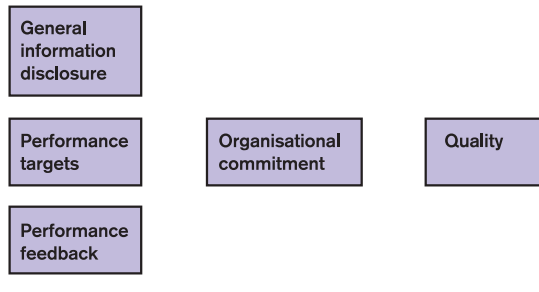
(f)



(h)



(j)



effect was less pronounced in establishments characterised by lower levels of employee commitment.

Figure 3 sets out in schematic form the main results of the regression analyses. 3(a) and 3(b) are a summary for the sample as a whole, in relation to productivity and quality respectively. The lower parts of the Figure give the results for particular sub-samples. The results for the sample as a whole provide selective support for all our main starting hypotheses.

When we tested our hypotheses on non-union and union establishments separately, two main points stood out. First, the results for the non-union sub-sample are virtually the same as those for the sample as a whole (compare (a) and (b) with (c) and (d) in Figure 3). Second, in line with expectations, the results for union establishments are generally weaker than those for non-union establishments. Thus none of the relationships found in the non-union sub-sample emerged as significant in the union sub-sample. Moreover, while the effects found for non-union establishments were also found in the union sub-sample, they were significantly attenuated. Specifically, the positive link between performance feedback and product/service quality was weaker in union settings (compare (d) and (f) in Figure 3).

Similarly, in both union and non-union establishments,

disclosure of performance targets by management had an indirect positive effect on labour productivity through its impact on employee commitment. However, this indirect effect was less pronounced in union settings, where the initial link between disclosure and OC was weaker (see (c) and (e) in Figure 3). In addition, in union settings the disclosure of performance targets had a negative direct impact on productivity, thereby cancelling out its positive indirect effect through commitment. In other words, our results suggest that in union settings, the disclosure of performance targets by management did not have a significant overall effect on labour productivity.

Of all the effects examined, only one was found to be stronger in union than in non-union establishments. This was the impact of general information disclosure on labour productivity. In union workplaces, management disclosure of general information to the workforce had a direct positive impact on productivity, while in non-union establishments the effect was not significant.

For the union sub-sample, we also looked separately at establishments where the unions were weak and where they were strong. The detailed results are summarised in Figure 3 (g) to (j). Here the results are not as clear cut. Contrary to expectations, the impact of information disclosure on outcomes was not consistently weaker in

One game involves bargaining over residual rents

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workplaces where unions were stronger. Specifically, where unions were weak there was the same direct positive link between performance feedback and product/service quality that we found in non-union settings. On the other hand, where unions were strong, the impact of performance feedback was not significant. (The same applied in terms of the impact of OC on labour productivity.) However, where unions were strong, general information disclosure by management was found to be positively related to labour productivity and, where they were weak, this relationship (as in non-union settings) was not significant.

Taken as a whole, our findings suggest that the impact of information disclosure on organisational performance is considerably more complex than is commonly assumed in the literature. They indicate that management's systematic sharing of information on performance targets can help to enhance employee commitment and that this, in turn, can have a positive impact on labour productivity. But the evidence is that this effect is indirect and that its impact is affected by the level of employees' organisational commitment.

The provision of feedback on the achievement of operational targets can also have a positive impact on labour productivity. However, our results indicate that, across the sample as a whole, this effect is only found where levels of employee organisational commitment are high. In other words, our analysis suggests that this beneficial effect on labour productivity will be confined primarily to situations where there already is a reasonable degree of alignment between individual and organisational goals.

The results relating to the disclosure of general financial and manpower information by management present a different picture. Across the sample as a whole, the disclosure of such general information seems to have little or no effect on labour productivity, especially where levels of employee commitment are low. However, where commitment is high, general information disclosure tends to be negatively, rather than positively, related to productivity.

One possible explanation for this unexpected result is that, other things being equal, management is more likely to disclose "bad news" to employees with high levels of commitment to the organisation. This would help to account for the stronger negative relation observed between disclosure and productivity at higher levels of commitment. It would also suggest, however, that disclosure may be a function of organisational performance, rather than the other way around, which raises important questions about direction of causality.

It is also worth noting that information disclosure seems to have a much weaker impact on product/service quality than on labour productivity. Specifically, our results for the total sample show that, of the three types of disclosure

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The impact is weaker where unions are stronger

examined, only the disclosure of information on operational performance outcomes has a significant impact on quality. The impact in this case is positive and direct, thereby lending support to the idea that information disclosure can have a beneficial effect on organisational performance independent of its impact on employee commitment.

As we noted at the outset, information disclosure by management tends to be greater in union than in non-union settings. However, these higher levels of disclosure do not necessarily translate into higher levels of either employee commitment or organisational performance. Our results suggest, in fact, that the general pattern of direct, indirect, and moderated benefits associated with disclosure applies primarily to non-union rather than to union establishments. This contrast is especially marked for establishments where unions are strong. On balance, therefore, our results suggest that there are greater direct and indirect benefits to be reaped from information disclosure in non-union than in union settings, but that in union establishments the impact of disclosure is likely to be more neutral than negative.

Equally important, our results indicate that employees' organisational commitment plays a far more important role in non-union than in union settings, either as a mediator or as a moderator of the impact of disclosure on performance outcomes. In union settings, disclosure not only has a weaker positive impact on commitment, but this commit-

ment itself has more limited direct and moderator effects on performance. Taken together, these findings suggest that information disclosure is likely to produce a greater degree of alignment between individual and organisational goals in situations where management has a clearer monopoly of information and where, because of the lack of a union presence and voice, alternative sources of information and competing interpretations of events are less easily available to employees.

These findings have implications for policy makers and legislators, for firms and their information practices, and for trade unions, particularly in the context of the new Information Directive. An implication for management is that there may be an optimal sequence to disclosure. Disclosure of performance targets enhances organisational commitment and can have a positive impact on productivity, but it also affects how employees respond to other types of information disclosure.

To maximise the positive impact of disclosure, firms might wish to start with disclosure of performance targets and then expand the disclosure agenda to include information on performance outcomes. However, in union settings, it may be best for management to focus directly on disclosure of general information. For unions, the most obvious role is in terms of general information. Here disclosure can have a positive impact on organisational performance. However, the findings also suggest that there is scope for unions to play a positive role in conveying operational information that affects employee commitment and labour productivity.

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Race relations

The laws of economics apply equally to the Sport of Kings, argues David Metcalf.

Horseracing mirrors our society. At one extreme, rich owners pay £1 million plus for a yearling with potential and receive a stud fee of up to £100,000 a time when a successful three- or four-year-old horse is retired to stud. At the other end of the scale, the people who care for these horses – stable lads (the same description applies to men and women) – have a collective agreement where the pay rate ranges from £10,000 to £12,000 a year for a 40-hour week.

In the wake of a hard-hitting campaign by the *Racing Post* – the industry's trade paper – the governing body (the British Horseracing Board) established a Commission to investigate stable

staff pay, employment and conditions. So it is worth setting out the connections between pay and employment in this industry.

There are some 6,000 stable staff (roughly 5,000 full-time equivalent) of whom 4,000 are directly involved in the care of horses. Some of these 4,000 will be paid above the minimum rates set out in the collective agreement between the union, the Stable Lads Association, and their employers, the National Trainers Federation. But the fact remains that stable lads are the poor relations of the racing industry.

A boost in the pay of stable staff could come in a number of ways: an increase in

basic rates, more generous overtime or compensation for weekend working, appearance money, or greater emphasis on performance related pay. But, whichever mechanisms are chosen, any such pay rise does not come out of thin air. Therefore we first examine the factors that influence the response of trainers and owners if they are expected to provide the resources for a pay rise for stable staff. Next, the important links between the product market and labour market, including prize money and alterations in the types of racing market, are set out. The factors that underpin workers' power are then analysed. Finally, we are fortunate in Britain to have had a virtual natural experiment to test the sensitivity of jobs to a pay rise – the introduction and subsequent uprating of the



national minimum wage. The evidence is examined and related to the pay and employment of stable staff. It suggests that a judicious pay hike would be unlikely to lead to job losses.

Three factors determine the sensitivity (in the jargon, "elasticity") of employment to a wage rise. First, employment is less sensitive the smaller labour costs are in total costs. (This is one reason why, for example, airline pilots earn very high salaries.) Among stable staff, labour costs comprise quite a high fraction of total labour costs. If the annual cost of keeping a horse in training is, say, £15,000 and a stable lad earns £17,000 while looking after three horses, labour costs would comprise some two fifths total training costs. So, on this factor, employment will be quite sensitive to a pay rise.

But we should not forget that, for the owner, there is the initial cost of the horse. Where a horse costs upwards of £50,000, an extra £1,000 a year or so on training fees may matter little. (But, for the many less wealthy owners who pay below £20,000 for a

horse, an increase of £1,000 a year in training costs may be quite significant.)

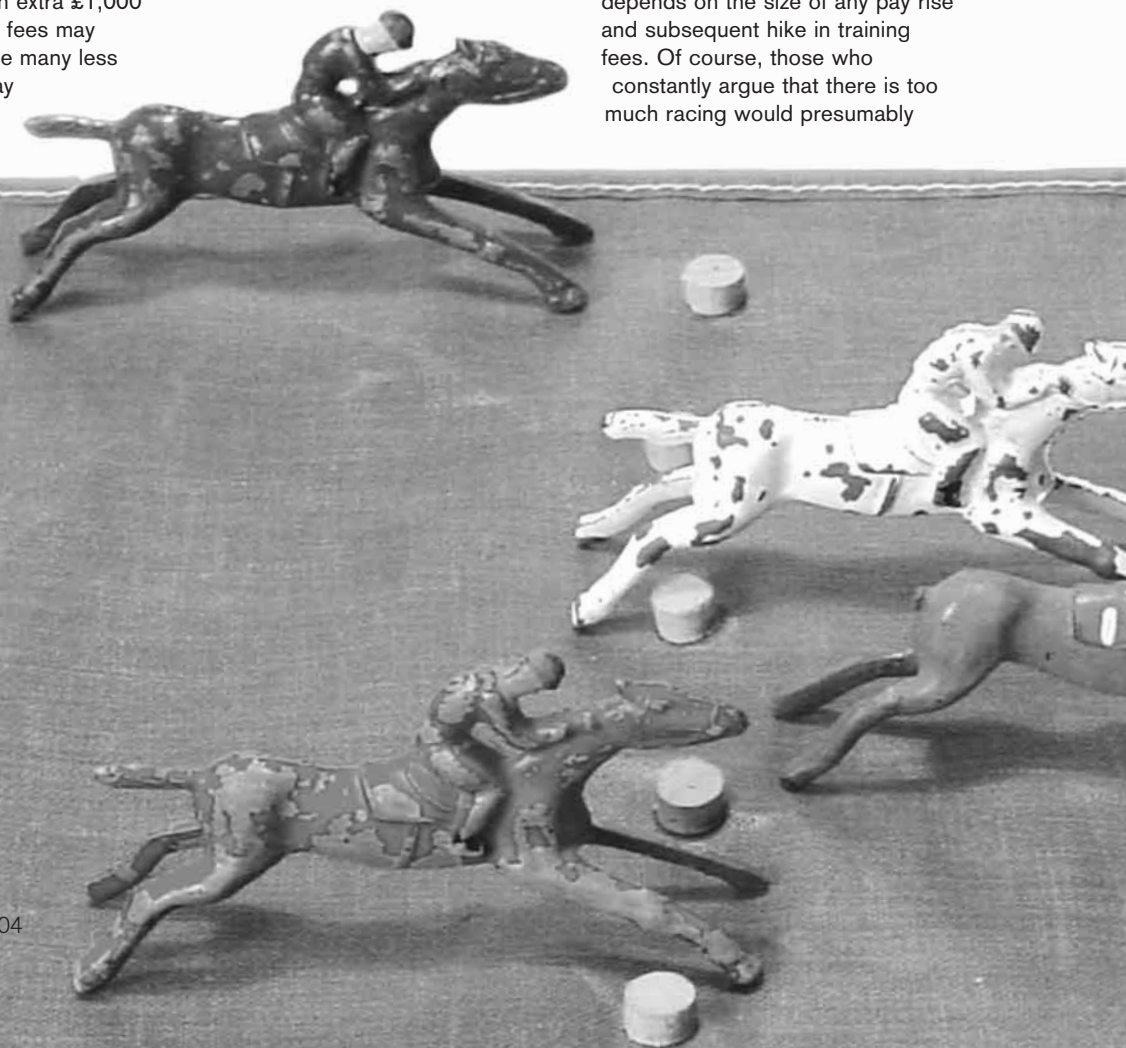
Second, is it easy to substitute capital or other workers for the group whose pay rises? It is not possible to replace riders with a machine, but it might be possible to find other stable lads, perhaps from countries about to be in the EU, like Poland or the Czech Republic. Providing any collective agreement between the National Trainers Federation and the Stable Lads is properly enforced, however, trainers have less incentive to seek such substitute labour because they would have to pay the employees from abroad similar rates. So, on this criterion, employment is likely to be quite insensitive to a pay rise.

Third, how sensitive is the demand for the product to any price increase resulting from the wage hike? For example, in the 1970s coal miners had huge clout because almost all

our power stations were coal-fired and few coal imports were allowed. The demand for coal (and hence coal miners) was pretty unresponsive to its cost. The "product" here is keeping the horse in training and the following questions need answers.

Would trainers automatically pass on to owners any pay increase for stable staff in the form of higher training fees? Many trainers already operate on low margins and would have no option. Maybe those Newmarket trainers charging around £25,000 a year per horse would not increase their fees, but they are probably paying their staff above the nationally agreed rates already.

Next, if training fees rise, how will owners react? The number of horses in training in recent years has been pretty steady at around 13,000. It is simply impossible to tell in advance whether this number would fall and by how much – it all depends on the size of any pay rise and subsequent hike in training fees. Of course, those who constantly argue that there is too much racing would presumably



welcome such a cut in the horse population – a smaller, more highly paid labour force looking after fewer horses.

So theory does not provide an unambiguous answer. While employment is insensitive to a pay rise, because it is difficult to use lower paid alternative staff, the fact that labour costs comprise a relatively high fraction of training fees means that trainers, and to some extent owners, have an incentive to economise on staff.

In recent years there has been a substantial increase in prize money – albeit from a very low base – which may make owners a bit more willing to put up with higher training fees. Certainly, if the boost in prize money continues, it would be easier to accommodate any pay hike for stable staff. But, if prize money stagnates or is eroded, such accommodation would be more difficult.

This leads to the “performance” element in stable staff pay. The mix varies according to the type of race, but presently prize money is allocated roughly as follows:

	%
owners	80
trainers	8
jockeys	6
stable staff	5
other	1

With prize money of some £80 million, the annual pool for stable staff when horses are in the frame is, therefore, £4 million, which averages out at some £1,000 per head – but obviously the lion's share goes to the successful yards.

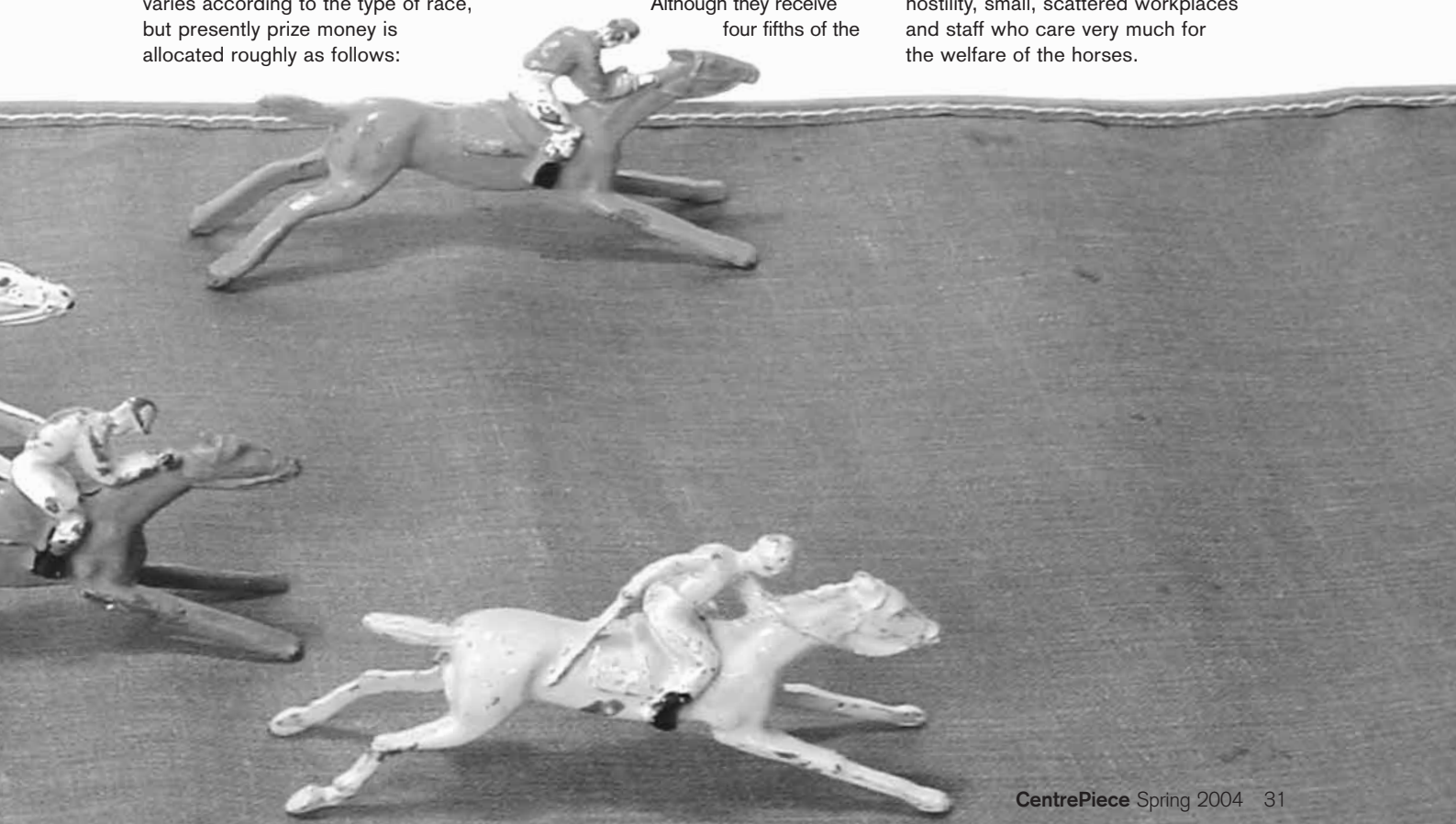
Would it be possible, or sensible, to increase this performance related pay? Even if the pool were doubled, on average stable staff would only get around an extra £1,000 each, with many getting almost nothing because their yard has fewer winners or placed horses. Further, who would pay for the doubling of the stables' share from 5% to 10%? It seems unlikely that the jockeys or trainers would easily submit to a reduction in their share. And owners are already rattling their sabres about the prize money on offer at particular tracks.

Although they receive four fifths of the

total, they would be reluctant to see that share diminish.

In the light of last year's boycott of the Sandown Park meeting by jockeys over the arcane matter of the use of mobile phones it is worth asking what gives workers power. In broad terms, power flows from two things: first, a closed shop giving workers some control over the labour supply; and, second, a credible threat of strike action that could impose real costs on the employer or, via collateral damage, on third parties.

Stable staff have never even been properly unionised, so it is no surprise that they have not had a proper closed shop. The Stable Lads Association – set up in 1975 in the wake of an unsuccessful strike by TGWU – is an unusual union because it is funded (since 2001) via a (very small) percentage of prize money and all stable employees are automatically members, though many stable staff seem unaware of this. The SLA has difficulty in organising effectively in the context of employer hostility, small, scattered workplaces and staff who care very much for the welfare of the horses.



The strike threat normally requires solidarity, either across the whole sector or more selectively. Frankly, there seems little chance of solidarity across all yards. However, if stable staff threatened to refuse to transport and look after horses scheduled to run at Cheltenham or Royal Ascot, for example, such a threat would need to be taken very seriously. Racing's "product" is perishable – like a newspaper or a tube journey – and any such selective action would have a profound impact on the whole industry. So it is much better to get the vexed issue of staff pay and conditions properly dealt with before it comes to this.

The racing industry was ahead of its time in the 1990s when there was no minimum wage protection for British employees. The collective agreement between the NTF and the SLA provided a *de facto* minimum wage for racing staff. The key to this was the enforcement mechanism: any trainer found paying below collectively agreed rates was at risk of losing his or her licence to train.

Since 1999 we have had a National Minimum Wage (NMW) – £4.85 an hour from October this year. The introduction

of the NMW and the subsequent upratings (covering some 1.5 million workers) provide a natural experiment to help answer the question whether a substantial increase in wages automatically leads to job losses. The theory discussed earlier did not yield an unambiguous answer in the case of horse racing. Fortunately, the evidence for the UK labour market is clearer. Mark Stewart and Steve Machin at Warwick University and the CEP respectively are agreed that, taking the labour market as a whole, the NMW has not caused job losses.

Even in the special case of care homes, which – like racing – are labour intensive and which have difficulty in passing on any increase in wage costs (because the Department of Social Security caps the payments that they receive), a 10% increase in pay only cut employment by between 2 and 4%. If a similar response held for racing, it would imply that a wage rise of, for example, £30 - £40 a week would only cause some 150 job losses.

In the overall labour market the NMW may even have given a boost to employment by making it easier to fill

job vacancies (in the jargon, the bottom end of the labour market may be monopsonistic). There is an important parallel with racing here. Tied housing, workers' love of particular horses in the yard and geographically isolated yards all combine together to give trainers some hold over workers. In such circumstances, a judicious pay rise will not automatically result in job losses. Surely the time has come for racing to recognise the dedicated, caring, knowledgeable workers who contribute so much to owners' pleasure and whose efforts provide bookmakers with their licence to print money.

David Metcalf is Professor of Industrial Relations at the LSE and a member of the CEP. He is an independent member of the Low Pay Commission. He is a local Jockey Club Steward at Plumpton and Folkestone and a member of the Economic Security partnership, which has two national hunt horses in training with Paul Webber.

This article is based on evidence submitted to the investigation by the Stable and Stud Staff Commission. The full evidence is available from http://cep.lse.ac.uk/people/cv/david_metcalf.pdf (click on [Stable and Stud Staff Commission]).



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